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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,774	02/11/2004	Jianbo Lu	81096192(FGT 1880 PA)	3409
28549	7590	11/29/2005	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			TRAN, DALENA	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,774

Applicant(s)

LU ET AL.

Examiner

Dalena Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-30 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/11/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on 9/14/05. Claims 1-30 are pending.

The prior art submitted on 2/11/04 has been considered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, and 7-8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wielenga (6,065,558) in view of Kawagoe (6,017,044).

As per claim 1, Wielenga discloses a method of controlling an automotive vehicle comprising: determining a road roll rate (see columns 3-4, lines 54-35). Watson et al. do not disclose determining a wheel departure angle. However, Kawagoe discloses determining a wheel departure angle in response the road roll rate, and controlling the vehicle in response the wheel departure angle (see columns 9-10, lines 9-40; and columns 13-15, lines 43-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Wielenga by combining determining a wheel departure angle for determining a running state of the vehicle in order to control the vehicle turning or steering to improve vehicle driving stability.

As per claim 7, Wielenga discloses determining road rate comprises determining road roll rate in response sensor roll rate (see columns 3-4, lines 54-35).

As per claim 8, Wielenga discloses determining a road roll rate, and total roll angle velocity in response to a road roll rate and a yaw rate (see columns 2-3, lines 13-12).

4. Claims 2-4, and 13-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wielenga (6,065,558), and Kawagoe (6,017,044) as applied to claim 1 above, and further in view of Dobler et al. (6,023,220).

As per claim 2, Kawagoe discloses controlling the vehicle in response road roll rate and a load-induced pitch misalignment (see columns 7-8, lines 33-54). Wielenga, and Kawagoe do not disclose determining a relative roll angle. However, Dobler et al. disclose determining a relative roll angle (see columns 2-3, lines 62-32; and columns 3-4, lines 46-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Wielenga, and Kawagoe by combining determining a relative roll angle for determining rollover condition to maintain vehicle stability.

Also, as per claim 3, Dobler et al. disclose determining a relative angle in response to a rate and a lateral acceleration (see columns 3-4, lines 46-23).

As per claim 4, Kawagoe discloses determining wheel departure angle comprises determining the wheel departure angle response to the roll rate, the yaw rate, the road angular rate, sensor yaw rate, the relative roll angle, the relative pitch angle, and the sensor pitch misalignment (see columns 10-11, lines 40-51).

As per claim 13, Kawagoe discloses determining a road roll rate is performed in a wheel lift status (see columns 9-10, lines 9-40).

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As per claim 14, Wielenga discloses determining a road roll rate is performed in response to brake precharge status (see column 3, lines 13-53).

5. Claims 9-10, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wielenga (6,065,558), and Kawagoe (6,017,044) as applied to claim 1 above, and further in view of Iwasaki (5,935,181).

As per claims 9-10, Wielenga, and Kawagoe do not disclose determining the road roll rate in response to a yaw rate. However, Ikemoto et al. disclose determining a road roll rate comprises determining the road roll rate in response to a roll rate, a yaw rate, and a pitch rate (see the abstract; and columns 5-7, lines 23-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Wielenga, and Kawagoe by combining determining the road roll rate in response to a yaw rate, and a pitch rate for accurately determining a rolling condition of the vehicle.

6. Claims 5-6, and 11-12, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 15-30, are allowable.

Remarks

7. Applicant's argument filed on 9/14/05 has been fully considered. Upon updated search, the new ground of rejection has been set forth as above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner
Dalena Tran

A handwritten signature in black ink, appearing to read 'Dalena Tran', with a horizontal line above the name.

November 23, 2005